Hobbies DESIGN

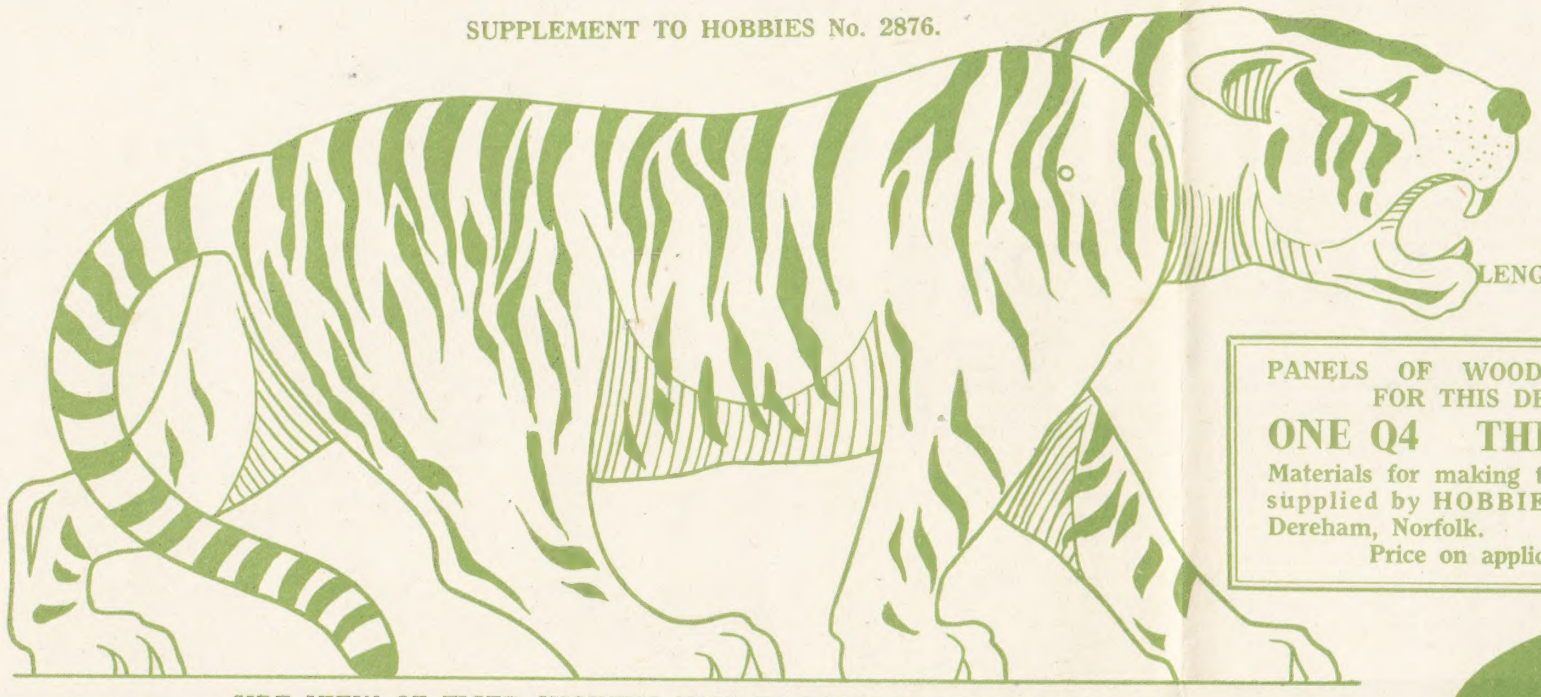
No. 2876
13 - 12 - 50

THE TIGER

A MECHANICAL WORKING TOY

—SIZE—
LENGTH 8½ins. HEIGHT 5½ins.

PANELS OF WOOD REQUIRED FOR THIS DESIGN
ONE Q4 THREE GD6
Materials for making this design are supplied by HOBBIES LIMITED, Dereham, Norfolk.
Price on application.



SIDE VIEW OF TIGER SHOWING HOW TO PAINT IN THE STRIPES, ETC.

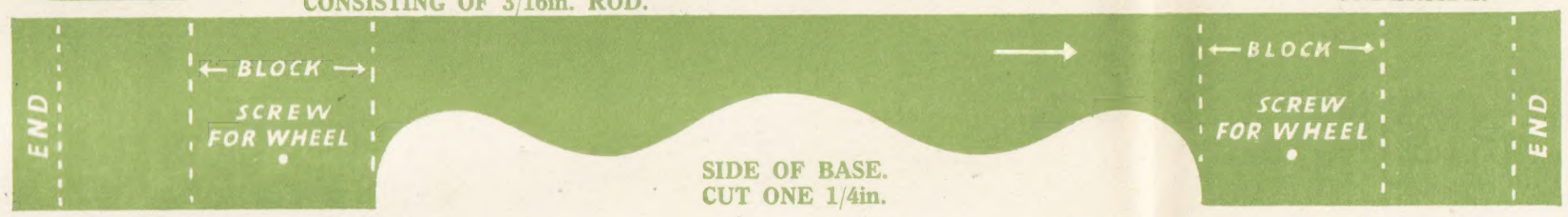
BLOCK TO TAKE SCREW OF AXLE. CUT THREE 3/8in.

NOTE.—This design sheet is only presented free with the current issue of Hobbies and not with back numbers. Further copies may be obtained.

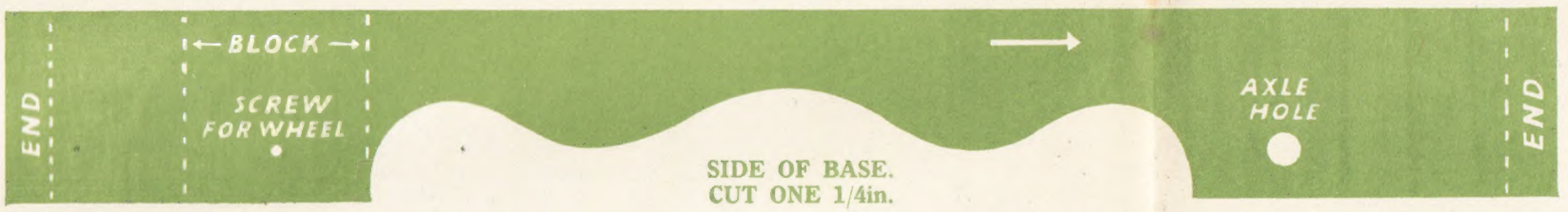
EARS. CUT FROM 1/4in. AND SHAPE TO SECTION

THE ARROWS INDICATE THE DIRECTION OF GRAIN OF WOOD.

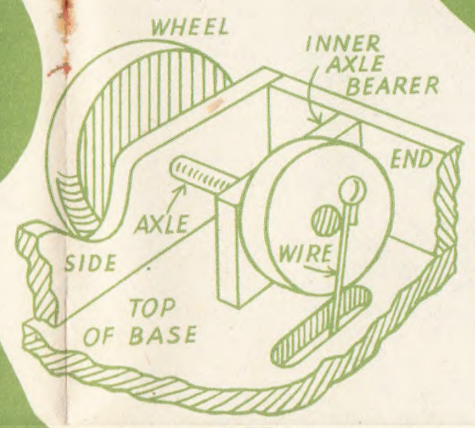
FULL SIZE OF AXLE BAR CONSISTING OF 3/16in. ROD.



SIDE OF BASE. CUT ONE 1/4in.

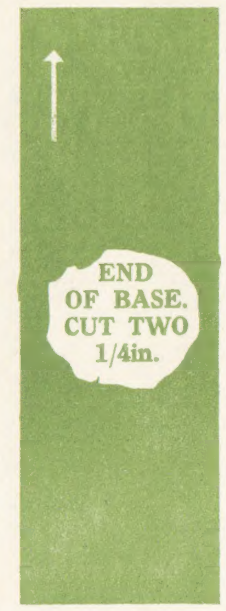


SIDE OF BASE. CUT ONE 1/4in.

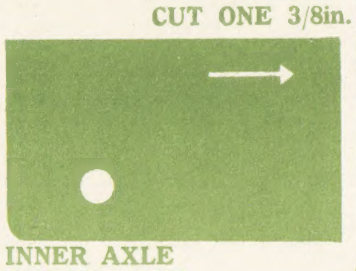


DETAIL SHOWING WORKING MECHANISM INSIDE THE BASE. VIEW FROM THE UNDERSIDE.

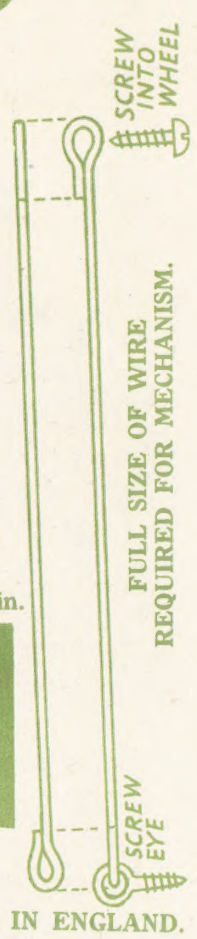
HEAD. CUT ONE 3/8in.



PIVOT WHEEL. CUT ONE 3/8in.



INNER AXLE BEARER. CUT ONE 1/4in.



FULL SIZE OF WIRE REQUIRED FOR MECHANISM.

PRINTED IN ENGLAND.

MECHANICAL TIGER TOY

THIS is another of the easily constructed pull-along toys, cut from thin wood, painted and completed from the full size patterns on the other side. These pattern parts can be pasted to the wood, or the outlines traced through carbon paper or ordinary tracing paper. If the paper itself is pasted down it will, of course, later have to be cleaned off with glasspaper.

As the tiger is pulled along, the head nods up and down by means of a simple mechanical contrivance. A piece of stiff wire is fixed to one of the wheels and to the inner end of the neck, so that as the wheels revolve they actuate the up and down motion of the head.

Foundation Parts

The whole thing stands on a base which is the first preparation to undertake. This baseboard is a plain rectangle, and on the underside of it are glued the two ends between the two sides. In one of the sides, a hole is bored to take the axle, but in all others the wheels are screwed straight on.

The side with the axle hole must be fixed with this hole at the same end as the slot for the wire. Behind the other three wheel positions—indicated by a screw hole—a block of ⅜in. wood is glued to provide the substance for the screw itself. The hole provided for the movable wheel on its axle, leads to the eccentric movement of the wheel on the opposite side. An underneath view of this corner is shown in detail. The axle bearer is glued firmly to the end at the position shown and, of course, to the underside of the base.

Axle Running

A hole in this inner axle must come immediately in line with the one in the side. The axle is then put through both the bearer and the side, and should be smoothed so it revolves with a minimum of friction. At one end of this axle rod the wheel is glued on, and at the other, the pivot wheel is fixed. A good method of ensuring the wheels do not revolve on the axle is to drive in a small sliver of razor blade to go right across the axle and into the main wheels.

To give additional strength to the whole base, little blocking pieces can be glued in the corners. You can now proceed with the construction of the actual animal. The two outer sections of the body are cut from ⅜in. wood and between them is glued the middle section. Get these in alignment, so the outer edge is the same, a position which is indicated by the dotted lines on the patterns of the outer body.

Ensure that the bottom of the four feet are level, so they will stand flat to the base. If they do not, rub the whole thing on a piece of glasspaper fixed to the workbench and rub down until the required result is obtained. The head piece is independent, and must be cleaned with glasspaper to make it slightly thinner, so it works easily between the outer body portions.

Carved Animal

The animal body itself is now 1½ins. thick, and if you wish, the parts can be rounded off to make them more realistic. The underside of the body can be rounded inwards to make the legs stand out a little more. The tail can also be rounded and slightly tapering, but the end of it should be left square finally to glue on to the base itself.

To return to the mechanism of the head and wheel, you must prepare the piece of wire to the length and shape shown. Turn one end to an eye in one direction, and then twist the opposite end to a similar eyelet, but at right-angles to the other. The whole thing completed, should be 4ins. long to ensure the satisfactory working. Use a long pin or a piece of stiff wire to make the pivot for the head. It is driven through the two sides, and the head itself, exactly at a point indicated on the patterns.

Drive it through all parts carefully, and then run a pencil mark on the side of the head, indicating where it comes in relation to the body. This will make it easier when you extract the pin and want to replace it.

Mechanism

A tiny screweye is fixed into the back of the head portion at the point indicated on the pattern, and this is threaded on one end of the wire. Take the wire through the slot in the base and fix the outside of the pivot wheel by means of the small screw, as you can see in the detail. Now put the animal's head in place, push the pin through and test that the mechanism is running satisfactorily.

The other three wheels are now fitted on to the base by means of ⅞in. round-headed screws, keeping in line so all four wheels rest level when in use.

It may be that some added weight is required to the base to ensure that the wheels grip the floor sufficiently to revolve. If so, then it is a simple matter to add a strip of lead in the corners under the base. The lead-covered electric cabling will do nicely for the purpose.

Again test the running parts, holding the body and head in place, then take the body away, so the whole thing can be painted. The wheels can be left in the natural state, but the base can be black with a green ground. Before undertaking the final coat, it is as well to give a first coat of grey to allow it to soak in hard before applying the final bright enamel.

Of course, all parts must be thoroughly clean and smoothed down with glasspaper, and it is a good plan to take the wheels off while the painting is being done. In painting the base, you can add the line effect of the panelling which you can see in the finished drawing, but if this cannot be undertaken neatly, it is better to leave the side plain.

Painting

The body of the animal can be painted natural colours, a light brown being given the whole body, with a deeper colour of shadow on the underside, and chocolate or black striped effect. The full size drawing on the sheet is a useful guide for this painting. Before painting finally, add the ears, which are cut from tiny pieces of wood shaped as shown to a taper, and then glued in the position indicated. Add the eye, nose and mouth, painting the inside of the mouth.

Take the pin out so the head can be painted independently to ensure that when you have added the paint it still moves satisfactorily between the two side portions. When the paint is thoroughly hard, the whole body is glued on to the base at the position indicated, and a final test made with the head in place.

If you find the toy does not act as it should, it is probably because not enough weight is given to the base, and some more can be added. This, of course, largely depends on the surface of the material upon which the toy is used. It will act better on a carpet, for instance, than on a smooth table, but a little manipulation to ensure smooth running can easily bring about the desired effect. For pulling, a piece of string is fixed to an eyelet or staple driven into the front end of the face near the top.